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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/563,716

04/11/2006

Heinrich Becker

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1522

21005

7590

12/19/2008

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

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EXAMINER

NWAONICHA, CHUKWUMA O

ART UNIT

PAPER NUMBER

1621

MAIL DATE

DELIVERY MODE

12/19/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/563,716

**Applicant(s)**

BECKER ET AL.

**Examiner**

CHUKWUMA O. NWAONICHA

**Art Unit**

1621

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 22-43 is/are pending in the application.
- 4a) Of the above claim(s) 26-28 and 38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 22-25, 29-37 and 39-43 is/are rejected.
- 7) ☒ Claim(s) 22-25, 29-37 and 39-43 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 11/6/06 & 5/6/08.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### **Current Status**

1. Claims 22-43 are pending in the application.

### ***Election/Restrictions***

Applicant's election with traverse of Group 2 (claims 22-25, 29-37 and 39-43, drawn to a mixture; wherein the variable L is P, As, Sb or Bi, and according to formula 2) in the reply filed on 15 September 2008 is acknowledged.

The traversal is on the ground(s) that claims 22-43 are related as a single invention. The Groups are directed to compounds of different back bones, and the compositions of these compounds are expected to possess different properties. These fiftyseven Groups are different from one another and therefore, they are different inventions, and require different search strategies that will impose an undue burden on the Examiner.

The requirement is still deemed proper and is therefore made **FINAL**.

Groups 1 and 3-57 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Groups, there being no allowable generic or linking claim. All claims consisting of Group 2 (claims 22-25, 29-37 and 39-43) drawn to a mixture; wherein the variable L is P, As, Sb or Bi, and according to formula 2, will be examined on the merits.

Applicants are reminded of their right to file divisional applications to the non-elected claims.

Applicants' are reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Priority***

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

***Claim objection***

**Claims** 22-25, 29-37 and 39-43 are objected because they contain non-elected subject matter. Correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 22-25, 29-37 and 39-43 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The terms "nonbonding electron pair, emission material B, one element of atomic number greater than 20, formula 1 to 48" in claims 22, 29 and 33 are relative term which renders the claim indefinite. The terms "nonbonding electron pair, emission material B,

one element of atomic number greater than 20, formula 1 to 48" are not defined by the claims, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Correction is required. **Additionally, Applicants are required to correct all other terms that are indefinite that the Examiner does not include. The Examiner suggests that Applicants combine claims 25 and 32 into claim 22.**

***Claim Rejections - 35 USC § 102***

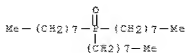
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 22-25, 29-31 and 33-37** are rejected under 35 U.S.C. 102(a) as being anticipated by Mekis et al., {One-Pot Synthesis of Highly Luminescent CdSe/CdS Core-Shell Nanocrystals via Organometallic and "Greener" Chemical Approaches, Journal of Physical Chemistry B (2003), 107(30), 7454-7462}.

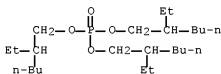
Mekis et al. disclose applicants claimed a mixture comprising the compound as shown below.



**Claims 22-25, 29-31 and 33-37** are rejected under 35 U.S.C. 102(b) as being

anticipated by Riwotzki et al, {Liquid-phase synthesis of colloids and redispersible powders of strongly luminescing  $\text{LaPO}_4\text{:Ce,Tb}$  nanocrystals, *Angewandte Chemie, International Edition* (2001), 40(3), 573-576}.

Riwotzki et al. disclose applicants claimed a mixture comprising the compound as shown below.



Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chukwuma O. Nwaonicha whose telephone number is 571-272-2908. The examiner can normally be reached on Monday thru Friday, 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Sullivan can be reached on 571-272-0779. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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/Chukwuma O. Nwaonicha/  
Examiner, Art Unit 1621

/Karl J. Puttlitz/

Primary Examiner, Art Unit 1621